EMERGENCY MEDICAL SERVICES
DATA SYSTEM STANDARDS
emsa #161

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ACKNOWLEDGEMENTS

Prehospital and Trauma Data Task Force

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EMS PLANNING AND DATA SYSTEM REPORTING TIMETABLE

EMS Plan (HS 1797.254)   **March 1 for next fiscal year**
including,
Trauma plan update (HS 1797.258)
Approved Training institutions (EMT-I, EMT-II, EMT-P, MICN)
EMS Providers (ALS, LALS, BLS, First Responders, Air Ambulance)
Continuing Education Providers

EMS Data Standards (HS 1797.254)   **June 1 for 1st quarter (Jan.,Feb.,March)**
                                              September 1 for 2nd quarter
                                              December 1 for 3rd quarter
                                              March 1 for 4th quarter

Defibrillation Data (CCR 100064)   **March 1 for previous calendar year**
    EMT-I and Public Safety

Trauma System Costs (HS 1798.164)   **January 1 for previous fiscal year**

EMS Fund Report (HS 1797.98b)   **January 1 for previous fiscal year**

Poison Control Centers (HS 1798.180)   **March 1 for previous calendar year**

1.   INTRODUCTION

The Emergency Medical Services Data System Standards Guide is a compilation of five products: the Standard Prehospital Data Element list, the Standard Prehospital Data Element Dictionary, the Local EMS Agency Data System Recommendations, the Local EMS Agency Reporting Recommendations and the EMS Authority (EMSA) Aggregate Data Report. These producats are the result of a joint effort by alpine, Mother Lode, San Joaquin EMS Agency, the Emergency Medical Services Authority, and the Prehospital and Trauma Data Advisory Committee, a multi-disciplinary group of data experts. Alpine, Mother Lode surveyed Local EMS Agencies to determine data practices. Using the results of this survey, the committee defined critical reports, developed data elements to support those reports, and developed data definitions with recommended codings.

The data set and dictionary are divided into Acore@ and Acomprehensive@ data elements. The core set contains elements and reports that the consensus group felt were essential measurements for EMS system management. The comprehensive set, noted by italics, is composed of data elements which would enhance prehospital reporting significantly and allow for increased refinement in the assessment of EMS performance. Of course, LEMSAs may determine that additional data reports and elements are required for local needs or studies.

EMSA has, in addition, identified data reports to be aggregated statewide. It should be emphasized that EMSA has an interest in this date only in the aggregate; it is not the Authority=s intention to collect patient-specific information. However, funding for local data projects will be conditional base on adherence to the core data elements/reports.

EMSA has promoted the use of prehospital data as a vehicle for EMS system management for several years. Through the federal Preventive Medical Services Block Grant Program, EMSA has funded a variety of projects encouraging collection and use of prehospital data. EMSa has also received federal funding from the National Highway and Traffic Safety Administration (NHTSA) via the California Office of Traffic Safety (OTS) to provide the stat agency with staff and resources to reach its data related goals.

EMSA obtained federal grant funding in 1992 from NHTSA via OTS to initiate the EMS Sensitivity Index (EMS SI) and Data Collection Project in California. The EMS SI was designed by NHTSA and the National Association of Governors Highway Representatives in 1989. The EMS SI requires the linkage of prehospital, police traffic, and patient outcome data to evaluate and analyze a state=s response to, care of, and outcome of victims of vehicular crashes.

A uniform core data set is key to the aggregation of data at the state level, for prehospital research, and to the performance of a statewide EMS SI pilot. The EMS Prehospital and Trauma Data Advisory Committee was (re)formed in March 1992. The committee included data experts from LEMSAs, public and private prehospital care providers, prehospital personnel, and state and nationally recognized EMS data experts. It examined existing local, state and national EMS data practices and trends and formulated the core and comprehensive data sets and suggested data reports. Staff from Alpine, Mother Lode, San Joaquin EMS Agency used the deliberations of the

committee to create a data dictionary for the core data set.

Trauma-specific data reports/elements for LEMSAs are currently under review and may yield additions to the prehospital set. Also, a National Uniform Data Set project is under development by NHTSA. When formally released, that data set will be reviewed and considered for inclusion into the State data set. Early indications reveal three or four data elements in the national set are either not captured by the State set or are defined substantively different. All local information systems developed should be sufficiently flexible to accommodate future revisions.

EMSA=s data program is also supporting the development of an EMS Continuous Quality Improvement (CQI), also know as Total Quality Management (TQM), project. The project is designed to extend the Demig philosophy of management to the prehospital arena. While this management philosophy has its roots in the manufacturing sector, both service and governmental organizations are rapidly adopting CQI. The Joint Commission on the Accreditation of Hospitals has recently shifted its own perspective from the inspection-driven Quality Assurance mode to that of CQI. CQI or TQM systems require that use of data to measure system status and system improvement. The appropriate collection and analysis of data will be vital to support these efforts. As the EMS CQI projects evolve, the measurements and indicators needed tofacilitate local EMS CQI efforts (reports and data elements) will be added to the prehospital data set.

EMSA believed that with technological advances and dwindling resources meaningful prehospital data collection by EMS agencies is a prerequisite for cost-efficient and reliable EMS system analysis. It is difficult for EMS to compete in the funding arena or to truly validate system needs without the purposeful colleciotn and analysis of data. In addition, federal funding agencies are emphasizing statewide data collection and linkage projects which require that development of standardized and compatible local data systems.

EMSA realizes that standardized statewide data collection is a long-term proposal. This document will provide initial guidance. Prehospital data collection using the standardized core data set will be promoted via the EMS Systems Guidelines as a required activity. The EMS Authority will continue to support local data efforts by providing technical assistance and by making data collection efforts a special funding priority.

II.   EMS DATA SYSTEM STRUCTURE

Determining What to Collect
A local EMS agency data system should collect the data necessary to meet the following requirements.

C   Provide information to the local agency regarding:
      S   EMS system quality
      S   Provider contract compliance
      S   Acute care facility contract compliance

C   Have the capability of providing information to the **State EMS Authority as outlined in**

State EMS Authority Reporting Needs.

Such as system ideally includes prehospital data for all patients who are attended to by emergency medical personnel, including:

C   Patients who are contacted in the prehospital setting but not treated either because treatment is unnecessary or treatment is refused.

C   Patients who are contacted in the prehospital setting and treated but not transported.

C   Patients who are contacted in the prehospital setting and are treated and transported.

C   Patients who are contacted at an acute care facility for the purpose of being transferred to another acute care facility.

EMS Patient Data Segments

Data for each patient in an EMS system are collected in various segments as the patient passes through that system. In general, there are five segments, which fall into two broader groupings, as follows:

Dispatch Data - Prehospital Data
First Responder Data - Prehospital Data
Ambulance Provider Data - Prehospital Data

Base Hospital Data - Hospital Data
Receiving Hospital Data - Hospital Data

In order to completely track patients through an EMS system, data from all of these segments are necessary. Generally, it is more practical to collect these date at the different must be copied to a single location in order for reports to be generated that involve data collected at different sites. Independent collection will only work if the data from each segment can be related to the other segments on a per-patient basis. Only that way can reports be generated from aggregated data that involve more than one segment of the data.

Standard Prehospital Data Element List

The following is a list of recommended non-narrative prehospital data elements for a comprehensive EMS data system. Element types and widths are included only to help clarify the nature of each element. The actual types and widths best suited for these elements will vary depending on local EMS system characteristics as well as local computer hardware and software requirements. A detailed data dictionary including recommended codings for coded fields can be found in Appendix A.

        Elements in upright type are recommended as core data elements.

Element	Element Name	Type	Width	Definition
1	PCR Number	Numeric	10	Unique identifier for each prehospital car such as a pre-printed number on the preh care report form
2	Incident Number	Character	10	Unique identification number assigned to incident by the dispatching agency
3	Call Date	Date	8	Date of EMS call
4	Provider Number	Numeric	3	EMS service provider identification numb
5	*Vehicle Number*	Numeric	4	EMS service provider unit identification r
6	Response Code	Numeric	1	Code level of transport to destination
7	Transport Code	Numeric	1	Type of EMS call, coded (e.g. scene, inte transfer)
8	Call Type	Numeric	2	End result of the EMS call, coded (e.g. tr by unit to emergency department, transpo refused, dead at scene)
9	Call Disposition	Numeric	2	Identification number of EMS provider th transported the patient
10	Transportation Provider Number	Numeric	3	Time 911 PSAP contacted
11	*Time PSAP Contacted*	Time	8	Time EMS unit dispatcher is notified
12	Time Unit Dispatcher Notified	Time	8	Time EMS unit begins physical motion
13	Time Enroute	Time	8	Time EMS unit arrives at the scene to wh was dispatched

14	Time Arrived at Scene	Time	8	Time EMS personnel perform initial patie assessment
15	*Time of Initial Patient Assm*	Time	8	Time EMS unit leaves the scene to which dispatched
16	Time Left Scene	Time	8	Time EMS unit leaves the scene to which dispatched
17	Time Arrived at Destination	Time	8	Time EMS unit arrives at destination with
1819	*Time AvailableTime at Post*	TimeTime	88	Time EMS unit is again availableTime EM contacted a base hospital for medical dire
20	*Time Cancelled*	Time	8	Time EMS call is cancelled
21	*Time Base Hospital Contact*	Time	8	Time EMS unit contracted
22	Base Hospital Contact	Numeric	1	Base hospital contact, coded (e.g. contac contact not attempted, contact attempted made)
23	Scene County	Numeric	2	State assigned county number for county location
24	Map Zone	Character	6	Specifically defined area which encompas scene location from standard map zone sy determined by LEMSA. Map zones shou larger than Zip Code zones.
25	Map Zone Type	Character	2	Type of zone from standard map zone sy determined by LEMSA (e.g. urban, rural,
26	Number of Patients at Scene	Numeric	2	Total count of individuals receiving treatr the scene
27	*Patient Number at Scene*	Numeric	2	Distinct index number of the patient at the scene(e.g. patient #4 of 6)
28	*Patient Social Security Number*	Character	11	Patient=s social security number
29	Patient Age	Numeric	3	Age of the patient in years or months
30	Patient Age Units	Character	1	Patient age units specifier, coded
31	Patient Gender	Numeric	1	Gender of patient, coded
32	Mechanism of Injury	Numeric	2	Mechanism of injury to patient, coded
33		Numeric	1	Intent of cause of injury to patient, coded

	Intent of Injury Cause			intentional, unintentional)
34	Type of Patient	Numeric	3	Type of patient, coded (e.g. trauma, medi obstetric)
35	*Witnessed Arrest, Pre-arrival*	Logical	1	Cardiac arrest witnessed before arrival of personnel
36	Initial Systolic BP	Numeric	3	Patient=s initial systolic blood pressure
3738	Initial Diastolic BPInitial Pulse	NumericNumeric	33	Patient=s initial diastolic blood pressurePa initial pulse rate
39	Initial Respiration	Numeric	3	Patient=s initial respiration rate
40	Initial ECG	Numeric	2	EMT=s assessment of ECG when electrod initially applied to patient, coded
41	*GCS Eye*	Numeric	1	Patient=s initial GCS eye score
42	*GCS Verbal*	Numeric	1	Patient=s initial GCS verbal score
43	*GCS Motor*	Numeric	1	Patient=s initial GCS motor score
44	GCS Total	Numeric	2	Total of patient=s initial GCS scores
45	*Clinical Severity Impression*	Numeric	1	EMT=s impression of patient severity as determined after initial assessment, coded critical, serious, non-emergent)
46	*Arrest After Arrival of EMS Personnel*	Logical	1	Cardiac arrest after arrival of EMS perso
47	*Clinical Course*	Numeric	1	Patient=s change in condition from time o assessment to time patient is discharge fr care of the EMS provider, coded
48	Special Scene Conditions	Numeric	2	Any special scene conditions, coded (e.g. complicated extrication, hazardous mater
49	Safety Equipment Used	Numeric	2	Safety equipment used by patient, coded restraint, shoulder restraint, airbag)
50	Alcohol Use Suspected	Logical	1	Alcohol use by patient suspected
51	Drug Use Suspected	Logical	1	Drug use by patient suspected
52	Primary Destination Decision Reason	Numeric	1	Primary reason why a particular medical f was selected to received the patient, code
53	Base Hospital	Numeric	4	Medical facility where on-line medical co orders were obtained, coded

54	Receiving Hospital	Numeric	4	Medical facility the patient is transported coded
55	Primary Patient Attendant	Character	6	Certification number of EMT with primar responsibility for patient care
56	Secondary Patient Attendant(s)	Character	6	Certification numbers of EMT≡s with secc responsibility for patient care
57	Procedure(s)	Numeric	3	Procedures performed by EMT≡s, first responders, or bystanders coded. There s be related to care giver types and certifica numbers (if applicable) of the care givers actually performed the procedures.
58	Medication(s)	Numeric	3	Medications administered by EMTs, first responders, or bystanders, coded. There be related to care giver types and certifica numbers (if applicable) of the care givers actually administered the medications.
	Call Level	Character	3	Determined from procedures and medicat information; ALS calls are defined as calls which ALS procedures or medications are administered; coded (e.g. ALS, BLS, unk
	Dispatch Time Interval	Time	8	Difference between Time Enroute and Ti Dispatcher Notified
	Provider Response Time Interval	Time	8	Difference between Time Arrived at Scen Time Unit Dispatcher Notified
	Enroute Time Interval	Time	8	Difference between Time Arrived at Scen Time Enroute
	On-Scene Time Interval	Time	8	Difference between Time Left Scene and Arrived at Scene
	Transport Time Interval	Time	8	Difference between Time Arrived at Dest and Time Left Scene
	Revised Trauma Score	Numeric	1.4	Calculated from patient information; Revi Trauma Score based on initial vial signs

Other core elements recommended that are to be determined from the set above are:

Elements in upright type are recommended as core data elements.

Elements in italics are recommended as comprehensive data elements.

III.   LOCAL EMS AGENCY DATA SYSTEM RECOMMENDATIONS

<u>Data Linkages</u>

In order to link data from different data tables within a data system, and to link those tables with data tables from other data systems, it is necessary for the tables involved to have common elements that can be compared to determine related records. Some of the elements included in the set of Standard Prehospital Data Elements in this document could prove necessary for linkage with other databases.

Other types of databases that an EMS agency might want to accomplish linkage with include receiving hospital, base hospital, ambulance service provider, first responder, coroner, health department, and law enforcement EMS related databases such as local and statewide motor vehicle accident databases.

Unique Prehospital Record Keys

All of the prehospital data tables within a LEMSA data system, and any prehospital records the LEMSA receives from other sources, such as providers, must be related by a unique key to ensure that all of the data related to one patient can only be associated to ensure that records are unique per patient, not per incident, since an incident may involve more than one patient.

The best relational key may vary from agency to agency, depending on idiosyncrasies of dispatch, PCR, inter-facility transfer, provider, and agency systems. The key should, however, be unique. Some possible keys are:

C   PCR Number
C   PCR Number + Provider Number
C   Year of Call Date + PCR Number
C   Call Date + PCR Number
C   Incident Number + Patient Number at Scene
C   Incident Number + Provider Number + Patient Number at Scene

Data Element Coding Definitions

Prehospital data collection and reporting needs vary from agency to agency. For consistency in LEMSA and State reports, it is important that consistent definitions of codes be used. The data dictionary in Appendix A includes definitions of codes where they are needed to eliminate ambiguity.

Relating Prehospital and EMT Data

In order for a LEMSA to generate quality improvement summary reports that involve EMT procedures and medications, the LEMSA will need to computerize such data in a way that the attempts and success of each procedure, and the medications administered, are captured and can be related to the corresponding EMT=s and PCR=s. The following is a suggested data element set for a data table that would hold this data and that could be related to EMT records by **Certification Number** and to Prehospital records by the **Unique Prehospital Record Key**.

Treatments Data Table Elements

Element	Element Name	Type	Width	Definition
1	(Unique prehospital Record Key)			Unique prehospital record key as defined above
2	Certification Number/Care Giver Type	Character	6	Certification number of EMT, or coded identifier for type of other care giver (e.g. bystander, first responder, paramedic intern)

				Sequence number to indicate sequence of events.
3	Treatment Sequence	Numeric	2	
4	Treatment Type	Numeric	1	Type of treatment, coded (procedure or medication)
5	Treatment Code	Character	4	Treatment, coded
6	Attempt successful?	Logical	1	Success of procedure attempt, Y/N or T/F

The EMTs certification data could then be related to the above table by the **Certification Number**. Below is a suggested data element set for a certification data table:

Certification Data Table Elements

Element	Element Name	Type	Width	Definition
1	Certification Number	Character	6	Certification Number
2	County	Numeric	2	County of certification, coded
3	Certification Status	Character	1	Status of certification, coded
4	Cert. Start Date	Date	8	Date of start of current certification
5	Cert. Expiration Date	Date	8	Date of expiration of current certification

This certification data could additionally be related to an EMT data table that would hold each EMTs general information. Below is a suggested data element set for an EMT data table:

EMT Data Table Elements

Element	Element Name	Type	Width	Definition
1	Certification Number	Character	6	Certification Number
2	Social Security Number	Character	1	Social Security Number
3	Last Name	Character	24	Last Name
4	First Name	Character	18	First Name
5	Company	Character	32	Provider company
6	Address 1	Character	32	Address
7	Address 2	Character	32	Address
8	City	Character	32	Address city
9	State	Character	2	Address state
10	ZIP Code	Character	10	Address ZIP Code
11	Home Phone	Character	14	Home phone
12	Work Phone	Character	14	Work phone

Data System Scheme Recommendation

It may also be helpful to LEMSAs to have a recommended relational data system scheme, in conjunction with the recommended element sets. One possible scheme that incorporates the recommendations suggested here and in the **State EMS Authority Reporting** section, is shown below.

Relational EMS Data System Scheme

IV.   LOCAL EMS AGENCY REPORTING RECOMMENDATIONS

Report Generation Methodology

When generating reports on prehospital data, it is necessary to first define the subset of prehospital records to be reported on. In other words, it is seldom useful to report on all records in a prehospital database. However, it is very useful to take a look at subsets of records. Reports on different subsets yield different information.

The process of extracting a subset of records from a database in called *querying*. In this docuament, queries are described in terms of *query parameters*. Query parameters describe which records should be included in a subset by defining limiting or acceptable values for various elements in the database. For instance, in order to query for records with a Call Date during 1991, the following parameters might be used:

> Call Date From: 01/01/1991
> Call Date Through: 12/31/1991

Once the query for a report has been performed, the report can actually be generated. The report must only use data from the queried subset or records. Since the same report can be generated for different subsets, the query used should be shown in the report.

General Format of Reports

It is useful for all EMS reports to follow a similar format that includes the following information:

C   Report title
C   Report run date
C   Page numbers
C   Query parameter information
C   Main body of report information

Figure 1 shows one possible generalized format for such reports:

Report Title Report Date: mm/dd/yyyy   Page p Query Parameter Information
Report Information

Figure 1: Generalized Report Format

The following are details regarding each of these pieces of information.

Report Title

Titles for reports should be consistent in form, and should describe the type of report. In each of the example reports here, titles describe the main row and column organization of the report.

Report Run Date
This is the date that a report is actually generated. It should automatically be included in the report by the report generator.

Page Numbers
Each page of a report should be numbered by the report generator.

Query Parameter Information
The report should show the query parameters used to describe the subset of records that the report is about.

Main Body of Report Information
The main body of the report should be organized clearly and be consistent with the description given in the report title.

Query Parameter for Prehospital Reports

For different groups of reports, a standard minimum set of query parameters is useful. For prehospital reports, the following list of query parameters represents a minimum set for generating reports.

Query Parameter Name	Element Used	Comments
Map Zones	Map Zone	Scene map zones to be included in the subset of records desired.
Map Zone	Map Zone Type	This parameter can be used to select subsets of records on urban, rural and remote calls. Generally, it makes sense to use only the **Map Zones** parameter or the **Map Zone Types** parameter in a query.
Providers	Provider Number	Provider numbers of providers to be included in the subset of records desired.
Call Dates From	Call Date	The earliest call date that should be included in the subset of records desired.
Call Dates Through	Call Date	The latest call date that should be included in the subset of records desired.
Call Types	Call Type	The call type codes of the call types to be included in the subset of records desired.
Response Codes	Response Code	The response codes to be included in the subset of records desired.
Transport Codes	Transport Code	The transport codes to be included in the subset of records desired.

Prehospital Data Summary Report List

Report	Report Title
1	Ambulance Provider Responses per Vehicle by Call Type
2	Ambulance Provider Responses per Vehicle by Call Disposition

3	Summary of Response Time Intervals.
4	Base Hospital Contacts per Vehicle
5	Base Hospital Contacts per Patient Type by Base Hospital
6	Patient Transports per Vehicle by Receiving Hospital
7	Patient Transports per Vehicle by Base Hospital
8	Patient per Base Hospital by Receiving Hospital
9	Patient per Primary Destination Decision Reason by Receiving Hospital
10	Patients per Patient Type by Receiving Hospital
11	Patients per Age by Gender
12	Cardiac Patients per Initial Rhythm Type
13	Patients per Machanism of Injury by Revised Trauma Score
14	Procedures and Medications Administered

Prehospital Data Summary Report Formats

Ambulance Provider Responses per Vehicle by Call Type
Report Date: *mm/dd/yyyy*

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*

			Call Type				
		Scene		Transfer		Vehicle	Total
	Vehicle	Number	% of Total	Number	% of Total	Number	% of Total
Provider A							
	001	1,111	16%	2,222	33%	3,333	50%
	002	1,111	16%	2,222	33%	3,333	50%
Provider Totals		2,222	33%	4,444	67%	6,666	100%
Provider B							
	001	1,111	16%	2,222	33%	3,333	50%
	002	1,111	16%	2,222	33%	3,333	50%
Provider Totals		2,222	33%	4,444	67%	6,666	100%
Totals		4,444	33%	8,888	67%	13,332	100%

Number of records selected by query: 13,382
Number of records with unknown Provider or unknown Call Type   50   0.3%

In some cases it may be more suitable to generate this report for only one provider at a time.

Ambulance Provider Responses per Vehicle by Call Disposition
Report Date: *mm/dd/yyyy*

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*

			Call Disposition				
		Transport	to ED	Transport Hospital	to non-ED	Vehicle	Total
	Vehicle	Number	% of Total	Number	% of Total	Number	% of Total
Provider A							
	001	1,111	16%	2,222	33%	3,333	50%
	002	1,111	16%	2,222	33%	3,333	50%
Provider Totals		2,222	33%	4,444	67%	6,666	100%
Provider B							
	001	1,111	16%	2,222	33%	3,333	50%
	002	1,111	16%	2,222	33%	3,333	50%
Provider Totals		2,222	33%	4,444	67%	6,666	100%
Totals		4,444	33%	8,888	67%	13,332	100%

Number of records selected by query: 13,382
Number of records with unknown Provider or unknown Call Type 50 0.3%

In some cases it may be more suitable to generate this report for only one provider at a time.

Summary of Response Time Intervals
Report Date: *mm/dd/yyyy*

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*

		No. of				
Minutes		Calls		% of Total		Cumulative
0.00-0.99		111		33%		33%
1.00-1.99		111		33%		67%
2.00-2.99		111		33%		100%
Totals		333		100%		100%
Minimum	0.00 min					

		Maximum	2.00 min						

Maximum	2.00 min							
Average	1.00 min							
Std Dev	0.67 min							
90 %tile	2.00 min							
95 %tile	2.00 min							

Number of records selected by query: 383
Number of records with unknown Provider or unknown Call Type   50   13.1%

Note: It is recommended that this report be generated only for a single Map Zone Type at a time, since response time requirements vary depending on geographical location.

The time intervals shown are arbitrary. Specific time intervals used should be adjusted to fit needs.

The following reports are also recommended in the same format as the ASummary Report Response Time Intervals per Provider@ above:
C   Summary Report of Enroute Time Intervals per Provider
C   Summary Report of Scene Time Intervals per Provider
C   Summary Report of Transport Time Intervals per Provider

Base Hospital Contacts per Vehicle
Report Date: *mm/dd/yyyy*

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*

		Base	Hospital	Contact			
		Base Contact Made		Base Contact Attempted But Not Made		Vehicle	Total
	Vehicle	Number	% of Total	Number	% of Total	Number	% of Total
Provider A							
	001	1,111	16%	2,222	33%	3,333	50%
	002	1,111	16%	2,222	33%	3,333	50%
Provider Totals		2,222	33%	4,444	67%	6,666	100%
Provider B							
	001	1,111	16%	2,222	33%	3,333	50%
	002	1,111	16%	2,222	33%	3,333	50%
Provider Totals		2,222	33%	4,444	67%	6,666	100%
Totals		4,444	33%	8,888	67%	13,332	100%

Number of records selected by query: 13,382
Number of records with unknown Provider or unknown Call Type   50   0.3%

Base Hospital Contacts per Patient Type by Base Hospital
Report Date: *mm/dd/yyyy*

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*

			Call Type				
		Base Hospital	A	Base Hospital	B	Patient Total	Type
Patient Type		Number	% of Total	Number	% of Total	Number	% of Total
Medical		1,111	50%	2,222	50%	3,333	50%
Obstetrical		1,111	50%	2,222	50%	3,333	50%
Totals		2,222	100%	4,444	100%	6,666	100%

Number of records selected by query: 13,382
Number of records with unknown Provider or unknown Call Type 50 0.3%

Patient Transports per Vehicle by Base Hospital
Report Date: *mm/dd/yyyy*

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*

			Base	Hospital			
		Base Hospital	A	Base Hospital	B	Vehicle	Total
	Vehicle	Number	% of Total	Number	% of Total	Number	% of Total
Provider A							
	001	1,111	16%	2,222	33%	3,333	50%
	002	1,111	16%	2,222	33%	3,333	50%
Provider Totals		2,222	33%	4,444	67%	6,666	100%
Provider B							
	001	1,111	16%	2,222	33%	3,333	50%
	002	1,111	16%	2,222	33%	3,333	50%
Provider Totals		2,222	33%	4,444	67%	6,666	100%
Totals		4,444	33%	8,888	67%	13,332	100%

Number of records selected by query: 13,382
Number of records with unknown Provider or unknown Call Type 50 0.3%

Patients per Base Hospital by Receiving Hospital
Report Date: *mm/dd/yyyy*

County: Countyname

Base Hospital		Receiving Hospital	Receiving Hospital A	Hospital	Receiving Hospital B		Base	Hospital Total
			Number	% of Total	Number	% of Total	Number	% of Total
Base Hospital A			1,111	50%	2,222	50%	3,333	50%
Base Hospital B			1,111	50%	2,222	50%	3,333	50%
Totals			2,222	100%	4,444	100%	6,666	100%

Number of records selected by query: 13,382
Number of records with unknown Provider or unknown Call Type   50   0.3%

Patients per Primary Destination Decision Reason by Receiving Hospital
Report Date: *mm/dd/yyyy*

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*

Primary Dest. Decision Reason			Receiving Hospital	Receiving Hospital A	Hospital	Receiving Hospital B		Dest. Reason	Decision Total
			Number	% of Total	Number	% of Total	Number	% of Total
Most Accessible			1,111	50%	2,222	50%	3,333	50%
			1,111	50%	2,222	50%	3,333	50%
Base Hospital Order								
Totals			2,222	100%	4,444	100%	6,666	100%

Number of records selected by query: 13,382
Number of records with unknown Provider or unknown Call Type   50   0.3%

Patients per Patient Type by Receiving Hospital
Report Date: *mm/dd/yyyy*

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*

Patient Type			Receiving Hospital	Receiving Hospital A	Hospital	Receiving Hospital B		Patient	Type Total
			Number	% of Total	Number	% of Total	Number	% of Total

Medical		1,111	50%	2,222	50%	3,333	50%
Obstetric		1,111	50%	2,222	50%	3,333	50%
Totals		2,222	100%	4,444	100%	6,666	100%

Number of records selected by query: 13,382
Number of records with unknown Provider or unknown Call Type   50   0.3%

Patients per Age by Gender
Report Date: *mm/dd/yyyy*

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*

			Patient	Gender			
		Male		Female		Age	Total
Patient Age		Number	% of Total	Number	% of Total	Number	% of Total
<1 month		1,111	50%	2,222	50%	3,333	50%
1-11 months		1,111	50%	2,222	50%	3,333	50%
Totals		2,222	100%	4,444	100%	6,666	100%

Number of records selected by query: 13,382
Number of records with unknown Provider or unknown Call Type   50   0.3%

Cardiac Patients per Initial Rhythm Type
Report Date: *mm/dd/yyyy*

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*

Initial ECG Rhythm		No. Of Patients		% of Total			
Sinus Rhythm		111		33%			
Sinus		111		33%			
Bradycardia		111		33%			
Sinus							
Tachycardia							
Totals		333		100%			

Number of records selected by query: 383
Number of records with unknown Provider or unknown Call Type   50   13.1%

Patients per Mechanism of Injury by Revised Trauma Score
Report Date: *mm/dd/yyyy*

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*

		Patient	Gender			
	0.0000-	1.9999	2.0000-	3.9999	Mechanism Injury	of Total
Mechanism of Injury	Number	% of Total	Number	% of Total	Number	% of Total
Motor Vehicle	1,111	50%	2,222	50%	3,333	50%
Accident	1,111	50%	2,222	50%	3,333	50%
Motorcycle Accident						
Totals	2,222	100%	4,444	100%	6,666	100%

Number of records selected by query: 13,382
Number of records with unknown Provider or unknown Call Type   50   0.3%

Procedures and Medications Administered
Report Date: *mm/dd/yyyy*

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*

Procedures		
101 Assessment		1,111
102 Assessment		1,111
Procedure Totals		2,222
Medications		1,111
201 Activated Charcoal		1,111
202 Alupent		1,111
Medication Totals		2,222

Query Parameters for EMT Certification Reports

The following list of query parameters represents a minimum set that should be available for generating EMT reports:

Query Parameter Name	Element Used	Comments
Certification Number/ Types	Certification Number	Either a single certification number for a single EMT, or the type identifier for a group of EMT=s.

Certification Counties	Certification County	Certification counties to be included in the subset of records desired.
Certification Statuses	Certification Status	Certification status codes to be included in the subset of records desired.
Certification Start Dates From	Certification Start Date	The earliest certification start date that should be included in the subset of records desired.
Certification Start Dates Through	Certification Start Date	The latest certification start date that should be included in the subset of records desired.
Certification Expiration Dates From	Certification Expiration Date	The earliest certification expiration date that should be included in the subset of records desired.
Certification Expiration Dates Through	Certification Expiration Date	The latest certification expiration date that should be included in the subset of records desired.

EMT Data Summary Report List

Report	Report Title
1	Summary of Certification per EMT Certification Number
2	Procedures and Medications Administered

EMT Data Summary Report Formats

Certification per EMT Certification Number
Report Date: *mm/dd/yyyy*

Certification Number/Types: *A, B, C*
County: *Countyname*

Cert. No.	Name	Status	County	Cert. Start Date	Cert. Exp. Date
AAAAA	*Lastname, Firstname*	*A*	*Countyname*	*mm/dd/yyyy*	*mm/dd/yyyy*
BBBBB	*Lastname, Firstname*	*B*	*Countyname*	*mm/dd/yyyy*	*mm/dd/yyyy*
CCCCC	*Lastname, Firstname*	*C*	*Countyname*	*mm/dd/yyyy*	*mm/dd/yyyy*

Procedures and Medications Administered
Report Date: *mm/dd/yyyy*

Certification Number/Types: *A, B, C*
County: *Countyname*

		Successful	Unsuccessful	Total	Success %
Procedures		1,111	2,222	3,333	33%
101 Assessment		1,111	2,222	3,333	33%
102 Airway Oral Care					
Procedure Totals		2,222	4,444	6,666	33%

Medications					
201 Activated Charcoal	1,111				
202 Alupent	1,111				
Medication Totals	2,222				

22.   STATE EMS AUTHORITY REPORTING NEEDS

Overview

On the following pages are recommendations for meeting State reporting needs related to process measures of EMS systems. These are recommendations related to items specifically listed by the State. However, there are more general issues that deserve attention as well:

Accuracy of Reports for LEMSAs

Accuracy of LEMSA reports to the State is dependent on many factors, including:

C   Completeness of Data Collection

   The State process measure items involve data from all ALS and BLS type calls. In the case of larger LEMSAs, collection of data for all BLS calls into a computerized data system has been identified as a problem area. Despite its difficulty, the EMS Authority believes that collection and analysis of BLS data is an important endeavor and should be pursued.

C   Coding Standards

   For statewide aggregation of data, involved elements and code sets would ideally be identical boundaries for all LEMSAs, so that subsets in reports to the State would be divided alon identical boundaries for all LEMSAs. Of course, this could be accomplished without identical code sets, but LEMSAs would have to code elements in such a way that subsets in reports to the Stat would remain standards and accurate.

C   Database Integrity

   The amount of validation that data entered into a data system is subjected to will vary among LEMSAs.

C   Report Integrity

   The integrity of reports generated by LEMSAs will vary according to
   C   methods used to develop information about non-computerized data
   C   accuracy of computerized data
   C   element and coding definitions
   C   accuracy of algorithms/logic used for reports

Specific Process Measure Reports

Report	Report Title
1	Ambulance Provider Responses per Call Type by Response Code and Transport Code
2	Summary of Response Time Intervals
3	ALS Base Hospital Contacts
4	Patient per Patient Type
5	Patients per Call Level
6	Trauma Patients by Severity
7	EMT Certification and Discipline

Those reports marked with an (*) above will be provided to the Authority by patient age breakdowns and be map zone type breakdowns, as follows:

Patient Age Groups	Map Zone Type Groups
<1 month 1 - 11 months 1 - 4 years 5 - 14 years 19 - 44 years 45 - 64 years 65 - 69 years 70 - 74 years 75 - 84 years > 84 years Because it is common convention to round ages to their greatest integers ([[a]]), rather than to their nearest integers ([[a+1/2]]), it is expected that ages collected and reported on will be rounded to their greatest integers.	Metropolitan Urban Suburban Rural Wilderness These groups are as defined in the Map Zone Type code set in Appendix A, Data System Structure.

The elements necessary to produce these reports include:

Provider Number
Call Type
Response Code
Transport Code
Time Unit Dispatcher Notified
Time Arrived at Scene
Call Level (can be calculated from Procedure(s) and Medication(s))
Base Hospital
Patient Type
Revised Trauma Score (can be calculated from GCS Total, Initial Respiration and Initial Systolic BP)

Additional elements will usually be necessary to allow the desired set of records to be queried for these reports.

Ambulance Provider Responses per Call Type by Response Code and Transport Code

The state will request reports of the numbers of emergency and non-emergency responses and transports for both prehospital and inter-facility transfers. The sample report form below would cover this information.

Ambulance Provider Responses per Call Type by Response Code and Transport Code
Report Date: *mm/dd/yyyy*

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*

Call Type		Responses Number	% of Total	Transports Number	% of Total	Response Number	Total % of Total
Scene	Code 1	1,111	33%	2,222	33%	3,333	50%
	Code 2	1,111	33%	2,222	33%	3,333	50%
	Code 3	1,111	33%	2,222	33%		
Scene Tot.		3,333	100%	6,666	100%	6,666	100%
Inter-facil.							
	Code 1	1,111	33%	2,222	33%	3,333	50%
	Code 2	1,111	33%	2,222	33%	3,333	50%
	Code 3	1,111	33%	2,222	33%		
Inter-facil. Totals		3,333	100%	6,666	100%	6,666	100%
TOTALS		6,666		13,332		13,332	100%

Number of records selected by query: 13,382
Number of records with unknown Provider or unknown Call Type   50   0.3%

Summary of Response Time Intervals

Summary of Response Time Intervals
Report Date: *mm/dd/yyyy*

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*
Map Zone Type: Urban

Minutes		No. Of Calls	% of Total	Cumulative %
0.00-0.99		111	33%	33%
1.00-1.99		111	33%	67%
2.00-2.99		111	33%	100%

TOTALS		333	100%	100%
Minimum:	0.00 min			
Maximum:	2.00 min			
Average:	1.00 min			
Std Dev:	0.67 min			
90 %ile	2.00 min			
95 %ile	2.00 min			

Number of records selected by query: 383
Number of records with unknown intervals: 50 13.1%

Note: The state will request that separate reports be generated for each **Map Zone Type**, since response time requirements vary depending on geographical location.

ALS Base Hospital Contacts

Base Hospital Contacts
Report Date: *mm/dd/yyyy*

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*
Call Level: ALS

	Base Made	Contact	Base Attempted Not	Contact But Made	Base Not	Contact Made	Patient	Total
	Number	% of Total	Number	% of Total	Number	% of Total	Number	% of Total
Patients	1,111	17%	2,222	33%	3,333	50%	6,666	100%

Number of records selected by query: 6,726
Number of records with Unknown Call Level or unknown Base Contact: 50 1%

Patients per Patient Type

Patients per Patient Type
Report Date: *mm/dd/yyyy*

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*

Patient Type		Number	% of Tot

Medical		1,111	25%
Obstetrical		1,111	25%
Psychiatric		1,111	25%
Trauma		1,111	25%
TOTALS		4,444	100%

Number of records selected by query: 4,494
Number of records with unknown Patient Type or unknown Base Hospital: 50 1%

Patients per Call Level

Patients per Call Level
Report Date: *mm/dd/yyyy*

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*

Call Level		Number	% of Total
BLS		1,111	50%
ALS		1,111	50%
TOTALS		2,222	100%

Number of records selected by query: 2,272
Number of records with unknown Call Level: 50 2%

Values for the **Call Level** element can be determined automatically from the **Procedure** and **Medication** elements. An ALS level call is defined as a call in which at least one ALS procedure is performed or at least one ALS medication is administered.

Trauma Patients by Severity

The EMS Authority would like to collect information regarding trauma patients by severity. The calculated **Revised Trauma Score** element seems to be the most accessible specifier for this.

The **Revised Trauma Score** element is currently described as a patient=s Revised Trauma Score based on vital signs. This score is calculated as follows:

A subscore, *G*, is derived from the patient=s total Glasgow Coma Scale (GCS) points as follows:

Total Glasgow Coma Scale Points	Derived Subscore
13-15	4
9-12	3
6-8	2
4-5	1
3	0

A subscore, *R*, is derived from the patient=s respiration rate:

Respiration Rate	Derived Subscore
10-29 per minute	4
>29 per minute	3
6-9 per minute	2
1-5 per minute	1
None	0

A subscore, *S*, is derived from the patient=s systolic blood pressure:

Systolic Blood Pressure	Derived Subscore
>89	4
76-89	3
50-75	2
1-49	1
0	0

The Revised Trauma Score (RTS) is defined as:

$$RTS = 0.9368\,G + 0.7326\,S + 0.2908\,R$$

RTS varies from 0 to approximately 8, and can have non-integer values.

It is likely that the state will request reports of Revised Trauma Score, broken down by Mechanisms of Injury, shown in the following example:

Patients per Mechanism of Injury by Revised Trauma Score
Report Date:　　*mm/dd/yyyy*

County:　　　　　Countyname
Call Dates From:　*mm/dd/yyyy* Through:　*mm/dd/yyyy*
Patient Age From:*0 years*　Through: *14 years*
County:　　　　　Countyname
Call Dates From:　*mm/dd/yyyy* Through:　*mm/dd/yyyy*

Mechanism of Injury	Number	% of Total	Number	% of Total	Number	% of Total
Motor Vehicle	1,111	50%	2,222	50%	3,333	50%
Accident	1,111	50%	2,222	50%	3,333	50%
Motorcycle Accident						
TOTAL	2,222	100%	4,444	100%	6,666	100%

Number of records selected by query:　　　13,382
Number of records with unknown Provider or unknown Call Type　　　50　　　0.3%

EMT Certification and Discipline

the EMS Authority has identified the need to collect aggregate data regarding numbers of EMT-Ps, EMT-Is, EMT-IIs and MICNs certified and disciplined each year. While this information may be manually produced easily by some LEMSAs, automation of these reports would permit.

C　　　Validation of Primary Patient Attendant and Secondary Patient Attendant(s) data in the Prehospital Data System

C　　　Tracking of procedures and medications administered by each EMT

C　　　Tracking certification status of each EMT

C　　　Reporting of counts of EMTs certified and recertified

A recommended set of elements for EMT tracking is included in the **Local EMS Agency Data System Needs** section.

Below is a sample report format for EMT certification and discipline information:

Annual EMT Certification and Discipline

County: Countyname
Call Dates From: *mm/dd/yyyy* Through: *mm/dd/yyyy*

	EMT-I	EMT-II	EMT-P	MICN
Action				
Certification	500	0	n/a	15
Accreditation	n/a	0	185	n/a
Formal Investigation	25	0	25	5
Probation	10	0	10	1
Suspension	9	0	6	0
Revocation	6	0	n/a	0
Denial	3	0	n/a	1
Denial of renewal	2	0	n/a	1

Number of records selected by query: 804

APPENDIX A - EMS DATA SYSTEM STRUCTURE

- This appendix contains a detailed data dictionary of the elements listed in the previous section, including recommended codings for coded elements.

Elements in upright type are recommended as core data elements.

Elements in italics are recommended as comprehensive data elements.

Element Name	PCR Number (Element Number: 1)
Type:	Numeric
Width:	10
Definition:	Unique identifier for each prehospital care report, sucha as a preprinted number on the prehospital care report form.
Significance:	This number can be used to relate automated records back to their PCRs. It also identifies each EMS patient uniquely, and therefore is ideal for use as a relational tie to other patient data tables.
Collection Issues:	Since it is important that this number be entered correctly for successful data linkage, the number should be as few digits as possible. However, the number also must be large enough to ensure uniqueness over a defined time period. In some systems, a separate PCR Number may not be necessary to uniquely identify each prehospital care report.

	For instance, it may be possible to satisfy this element using dispatch generated incident numbers plus patient numbers that uniquely identify each patient belonging to the same incident.
Recommended Validation:	Prohibit entry of duplicate numbers with the time period that each PCR Number is unique. Compare to valid range of values.
Recommended Coding:	This number should be unique for each PCR form used in a local EMS agency≈s jurisdiction over a long time period. The numbers should be unique at least for each calendar year.

Element Name	*Incident Number* (Element Number:2)
Type:	Character
Width:	10
Definition:	Unique identification number assigned to each incident by the dispatch agency
Significance:	This number can be used to relate automated records to dispatch data.
Collection Issues:	In many systems this element, and all most time elements, can be imported from computer aided dispatch databases.
Recommended Validation:	
Recommended Coding:	

Element Name	Call Date (Element Number:3)
Type:	Date
Width:	8
Definition:	Date of EMS Call
Significance:	This date can help to uniquely identify each EMS patient, and therefore is ideal for use as part of a relational tie to other patient data tables. This date can also be used to relate automated records to other databases. This date also is necessary when generating reports by call date ranges.
Collection Issues:	
Recommended Validation:	Compare to expected date range.
Recommended Coding:	

Element Name	Provider Number (Element Number:4)
Type:	Numeric

Width:	3
Definition:	EMS service provider identification number
Significance:	This element allows for grouping of records by ambulance service provider.
Collection Issues:	
Recommended Validation:	Compare to code set.
Recommended Coding:	Provider numbers must be unique for each ambulance service provider.

Element Name	*Vehicle Number* (Element Number: 5)
Type:	Numeric
Width:	4
Definition:	EMS service provider unit identification number
Significance:	This element allows for grouping of records by vehicle numbers for each ambulance service provider.
Collection Issues:	
Recommended Validation:	
Recommended Coding:	Vehicle numbers must be unique for each ambulance for each provider.

Element Name	**Response Code** (Element Number: 6)
Type:	Numeric
Width:	1
Definition:	Code level of response to scene
Significance:	This element allows for grouping of records by dispatch code level, and allows for comparison with **Transport Code** data.
Collection Issues:	
Recommended Validation:	Compare to code set.
Recommended Coding:	See code set below.

Code	Name	Definition
0	Unknown	Not properly indicated on PCR
1	Normal running	
2	Expedient running	
3	Lights and siren running	

Element Name	**Transport Code** (Element Number: 7)
Type:	Numeric
Width:	1
Definition:	Code level of transport to destination
Significance:	This element allows for grouping of records by transport code level, and allows for comparison with **Response Code** data.
Collection Issues:	
Recommended Validation:	Compare to code set
Recommended Coding:	See code set below

Code	Name	Definition
0	Unknown	Not properly indicated on PCR
1	Normal running	
2	Expedient running	
3	Lights and siren running	

Element Name	*Call Type* (Element Number:8)
Type:	Numeric
Width:	2
Definition:	Type of EMS call, coded (e.g. scene, inter-facility transfer)
Significance:	This element is useful to divide records into scene and inter-facility transfer type calls.
Collection Issues:	
Recommended Validation:	Compare to code set
Recommended Coding:	See code set below

Code	Name	Definition
0	Unknown	Not properly indicated on PCR
1	Scene	
2	Inter-facility	A patient transfer between two hospitals
3	Other	

Element Name	**Call Disposition** (Element Number: 9)
Type:	Numeric
Width:	2
Definition:	End result of the EMS call, coded (e.g. transport by unit to emergency department, transportation refused, dead at scene)
Significance:	This element allows for grouping of records by the results of each EMS call, and for comparison of counts and percentages of different dispositions.
Collection Issues:	For accuracy, this element should be on the PCR as a separate and distinct item.
Recommended Validation:	Compare to code set
Recommended Coding:	See code set below

Code	Name	Definition
00	Unknown	Not properly indicated on PCR
10	Transport by unit at emergency department	
20	Transport by unit to hospital (non-ED)	A patient transfer between two hospitals
21	Transport by unit to non-hospital medical facility	
22	Transport by unit to nursing home	
30	Transport by unit to other location	
31	Transport by unit to rendezvous point	
40	Transport by another unit from scene	
41	Treatment/transport refused	
42	Dead at scene	
43	No patient contact made	
44	Call cancelled	Call cancelled by unit dispatcher
99	Other	

Element Name	**Transport Provider Number** (Element Number: 10)
Type:	Numeric
Width:	3
Definition:	Identification number of EMS provider that transported the patient

Significance:	This element aids in the correlation of PCRs for patients that are cared for by more than one ambulance service provider.
Collection Issues:	
Recommended Validation:	Compare to code set
Recommended Coding:	Provider numbers must be unique for each ambulance service provider.

Element Name	***Time PSAP Contacted*** (Element Number: 11)
Type:	Time
Width:	8
Definition:	time 911 PSAP contacted
Significance:	This time can be used to calculate time intervals beginning with the initial A911 call@
Collection Issues:	In many systems this can be a difficult time to collect as it often must be collected from a different source than the rest of the times included in this set.
Recommended Validation:	Compare to valid time range (00:00:00 to 23:59:59)
Recommended Coding:	

Element Name	**Time Unit Dispatcher Notified** (Element Number: 12)
Type:	Time
Width:	8
Definition:	Time EMS unit dispatcher is notified
Significance:	This time can be used to calculate time intervals beginning with the initial contact of the EMS unit dispatcher
Collection Issues:	
Recommended Validation:	Compare to valid time range (00:00:00 to 23:59:59)
Recommended Coding:	

Element Name	**Time Enroute** (Element Number: 13)
Type:	Time
Width:	8
Definition:	Time EMS unit begins physical motion
Significance:	This time can be used to calculate time intervals beginning or ending with the initial motion of the EMS unit on the call.

Collection Issues:	For consistency, dispatch must be notified when physical motion begins in order for all times to be according to the clock at the dispatch agency.
Recommended Validation:	Compare to valid time range (00:00:00 to 23:59:59) Must be later than **Time Unit Dispatcher Notified**
Recommended Coding:	

Element Name	**Time Arrived at Scene** (Element Number: 14)
Type:	Time
Width:	8
Definition:	Time EMS arrives at the scene to which it was dispatched
Significance:	This time can be used to calculate time intervals beginning or ending with the arrival of the EMS unit at the scene.
Collection Issues:	For consistency, dispatch should be notified when arrival occurs in order for all times to be according to the clock at the dispatch agency.
Recommended Validation:	Compare to valid time range (00:00:00 to 23:59:59) Must be later than **Time Enroute**
Recommended Coding:	

Element Name	**Time of Initial Patient Assessment** (Element Number: 15)
Type:	Time
Width:	8
Definition:	Time EMS personnel perform initial patient assessment
Significance:	This time can be used to calculate time intervals beginning or ending with the arrival of the EMS unit at the scene.
Collection Issues:	For consistency, dispatch should be notified when arrival occurs in order for all times to be according to the clock at the dispatch agency.
Recommended Validation:	Compare to valid time range (00:00:00 to 23:59:59) Must be later than **Time Arrived at Scene**
Recommended Coding:	

Element Name	**Time Left Scene** (Element Number: 16)
Type:	Time

Width:	8
Definition:	Time EMS unit leaves the scene to which it was dispatched
Significance:	This time can be used to calculate time intervals beginning or ending with the departure of the EMS unit from the scene.
Collection Issues:	For consistency, dispatch should be notified when the EMS unit leaves the scene in order for all times to be according to the clock at the dispatch agency.
Recommended Validation:	Compare to valid time range (00:00:00 to 23:59:59) Must be later than **Time Arrived at Scene**
Recommended Coding:	

Element Name	**Time Arrived at Destination** (Element Number: 17)
Type:	Time
Width:	8
Definition:	Time EMS unit arrives at destination with patient
Significance:	This time can be used to calculate time intervals beginning or ending with the arrival of the EMS unit at the transport destination.
Collection Issues:	For consistency, dispatch should be notified when physical motion stops in order for all times to be according to the clock at the dispatch agency.
Recommended Validation:	Compare to valid time range (00:00:00 to 23:59:59) Must be later than **Time Left Scene**
Recommended Coding:	

Element Name	**Time Available** (Element Number: 18)
Type:	Time
Width:	8
Definition:	Time EMS unit is again available
Significance:	This time can be used to calculate time intervals beginning or ending with the time the EMS unit is available for another dispatch.
Collection Issues:	For consistency, dispatch should be notified when the EMS unit is available in order for all times to be according to the clock at the dispatch agency.
Recommended Validation:	Compare to valid time range (00:00:00 to 23:59:59)

	Must be later than **Time Arrived at Destination**
Recommended Coding:	

Element Name	*Time at Post* (Element Number: 19)
Type:	Time
Width:	8
Definition:	Time EMS unit arrives back at post.
Significance:	This time can be used to calculate time intervals ending with the arrival of the EMS unit back at its post
Collection Issues:	For consistency, dispatch should be notified when the EMS unit arrives back at post in order for all times to be according to the clock at the dispatch agency.
Recommended Validation:	Compare to valid time range (00:00:00 to 23:59:59) Must be later than **Time Available**
Recommended Coding:	

Element Name	**Base Hospital Contact** (Element Number: 22)
Type:	Numeric
Width:	1
Definition:	Base hospital contact, coded (e.g. contact made, contact not attempted, contact attempted but not made)
Significance:	This element can be used to analyze use of base hospitals
Collection Issues:	
Recommended Validation:	Compare to code set.
Recommended Coding:	See code set below.

Code	Name	Definition
0	Unknown	Not properly indicated on PCR
1	Base contact made	
2	Base contact attempted but not made	
3	Base contact not attempted	

Element Name	**Scene County** (Element Number: 23)
Type:	Numeric
Width:	2

Definition:	State assigned county number for county of scene location.
Significance:	
Collection Issues:	
Recommended Validation:	Compare to code set.
Recommended Coding:	See code set below.

Code	Name	Definition
00	Unknown	
01	Alameda	
02	Alpine	
03	Amador	
04	Butte	
05	Calaveras	
06	Colusa	
07	Contra Costa	
08	Del Norte	
09	El Dorado	
10	Fresno	
11	Glenn	
12	Humboldt	
13	Imperial	
14	Inyo	
15	Kern	
16	Kings	
17	Lake	
18	Lassen	
19	Los Angeles	
20	Madera	
21	Marin	
22	Mariposa	
23	Mendocino	
24	Merced	

25	Modoc	
26	Mono	
27	Monterey	
28	Napa	
29	Nevada	
30	Orange	

31	Placer	
32	Plumas	
33	Riverside	
34	Sacramento	
35	San Benito	
36	San Bernardino	
37	San Diego	
38	San Francisco	
39	San Joaquin	
40	San Luis Obispo	
41	San Mateo	
42	Santa Barbara	
43	Santa Clara	
44	Santa Cruz	
45	Shasta	
46	Sierra	
47	Siskiyou	
48	Solano	
49	Sonoma	
50	Stanislaus	
51	Sutter	
52	Tehama	
53	Trinity	
54	Tulare	
55	Tuolumne	
56	Ventura	

57	Yolo	
58	Yuba	
99	Out of State	Scene located in a county outside of California

Element Name	**Map Zone** (Element Number: 24)
Type:	Character
Width:	6
Definition:	Specifically defined area which encompasses the scene location from standard map zone system determined by LEMSA. Map zones should be no larger than ZIP Code zones.
Significance:	This element allows EMS calls to be categorized by Map Zone Types (e.g. metropolitan, urban, suburban, remote and wilderness) for geographic and demographic analyses.
Collection Issues:	In many systems this can be collected from the unit dispatch agency.
Recommended Validation:	Compare to code set.
Recommended Coding:	It is usually preferable to use an existing, widely used map system.

Element Name	**Map Zone Type** (Element Number: 25)
Type:	Character
Width:	2
Definition:	Type of zone from standard map zone system determined by LEMSA (e.g. urban, rural, remote)
Significance:	This element allows for grouping records by scene population density, which is necessary if time interval requirements for providers vary depending on type of scene location.
Collection Issues:	In many systems this can be collected from the unit dispatch agency. As it is necessary that **Map Zone Type** actually be an attribute of each **Map Zone**, it is usually preferable that this not be an explicit element in this data table, but instead an element of the **Map Zone** code set, or an attribute of each **Map Zone** code.
Recommended Validation:	Compare to code set.
Recommended Coding:	See code set below.

Code	Name	Definition

ME	Metropolitan	All census places with a population density of greater than 500 persons per square mile, or census tracts and enumeration districts without census tracts which have a population density of greater than 500 persons per square mile.
UR	Urban	As above with a population density of 101 to 500 persons per square mile.
SU	Suburban	As above with a population density of 50 to 100 persons per square mile.
RU	Rural	As above with a population density of 7 to 50 persons per square mile.
WI	Wilderness	As above with a population density of less than 7 persons per square mile.

Element Name	**Number of Patients at Scene** (Element Number: 26)
Type:	Numeric
Width:	2
Definition:	Total count of individuals receiving treatment at the scene.
Significance:	This element indicates the number of patients at the scene, which may affect the level of care given.
Collection Issues:	
Recommended Validation:	
Recommended Coding:	

Element Name	*Patient Number at Scene* (Element Number: 27)
Type:	Numeric
Width:	2
Definition:	Distinct index number of the patient at the scene (e.g. patient #4 of 6)
Significance:	This element may be used in conjunction with other elements to identify each record uniquely.
Collection Issues:	
Recommended Validation:	No two patients from the same incident should have the same patient number.

No patient number should be greater than the **Number of Patients at Scene**. |
| Recommended Coding: | |

Element Name	*Patient Social Security Number* (Element Number: 28)

Type:	Character
Width:	11
Definition:	Patient≈s social security number
Significance:	This element may be used in conjunction with other elements to identify each record uniquely. It also identifies each EMS patient uniquely, and therefore is ideal for use as a relational tie to other patient data tables.
Collection Issues:	
Recommended Validation:	No two patients should have the same Social Security Number. This does not mean that no two records should have the same Social Security Number.
Recommended Coding:	

Element Name	**Patient Age** (Element Number: 29)
Type:	Numeric
Width:	2
Definition:	Age of the patient in years or months
Significance:	This element allows for grouping and analysis of records by patient age.
Collection Issues:	It is usually preferable to calculate the patient≈s age from a date of birth whenever possible.
Recommended Validation:	
Recommended Coding:	

Element Name	**Patient Age Units** (Element Number: 30)
Type:	Character
Width:	1
Definition:	Patient age units specifier, coded
Significance:	This element makes it possible to collect ages in days or months for pediatric patients.
Collection Issues:	
Recommended Validation:	Compare to code set.
Recommended Coding:	See code set below

Code	Name	Definition
D	*Days*	This is a comprehensive code.

M	Months	
Y	Years	

Element Name	**Patient Gender** (Element Number: 31)
Type:	Numeric
Width:	1
Definition:	Gender of patient, coded
Significance:	This element allows for grouping and analysis of records by patient gender.
Collection Issues:	
Recommended Validation:	Compare to code set.
Recommended Coding:	See code set below.

Code	Name	Definition
M	Male	
F	Female	
U	Unknown	

Element Name	**Mechanism of Injury** (Element Number: 32)
Type:	Numeric
Width:	2
Definition:	Mechanism of injury to patient, coded
Significance:	This element allows for grouping of injured patient records by mechanisms of injury and types of injuries, severity scores, patient outcomes and other factors.
Collection Issues:	
Recommended Validation:	Compare to code set.
Recommended Coding:	See code set below.

Code	Name	Definition
00	Unknown	Not properly indicated on PCR
11	Motor vehicle crash	
12	Motorcycle crash	
13	Bicycle crash	
14	Watercraft	

Code	Name	
15	Aircraft	
21	Pedestrian vs. Vehicle	
31	Gunshot	
32	Stabbing	
33	Other Assault	
41	Near drowning	
51	Fall	
61	Smoke/fumes	
62	Fire	
63	Explosion	
64	Hazardous material	
65	Electrical	
71	Animal	
81	Machinery	
91	Recreation/sport	
97	Other mechanism, blunt	
98	Other mechanism, penetrating	
99	Other mechanism, not specified	

Element Name	*Intent of Injury Cause* (Element Number: 33)
Type:	Numeric
Width:	1
Definition:	Intent of cause of injury to patient, coded (e.g. intentional, unintentional)
Significance:	This element allows for grouping of injured patient records by intentional and unintentional injury categories, and therefore can offer information about the proportions of these categories for given sets of records, such as sets by **Map Zone**.
Collection Issues:	It may not be possible in all cases to make a conclusive judgement as to intent of injury.
Recommended Validation:	Compare to code set.
Recommended Coding:	See code set below.

Code	Name	Definition

Code	Name	Definition
00	Unknown or N/A	Not properly indicated on PCR or not applicable.
01	Intentional	
02	Unintentional	

Element Name	**Type of Patient** (Element Number: 34)
Type:	Numeric
Width:	3
Definition:	Type of patient, coded (e.g. trauma, medical, obstetric)
Significance:	This element allows for grouping and analysis of records by patient type.
Collection Issues:	
Recommended Validation:	Compare to code set.
Recommended Coding:	See code set below. Codes in italics represent a comprehensive level of detail.

Code	Name	Definition
000	Unknown	Not properly indicated on PCR
100	Medical	
101	*Acute abdomen*	
102	*Airway obstruction*	
103	*Allergic reaction*	
104	*Altered level of consciousness*	
105	*Cardiac arrest*	
106	*Chest discomfort, cardiac*	
107	*Chest discomfort, non-cardiac*	
108	*CVA/Stroke/TIA*	
109	*Diabetes complication*	
110	*Drug/alcohol intoxication*	
111	*Hypotnesion*	
112	*Hypertension*	
113	*Hypothermia/frostbite*	
114	*Heat illness*	
115	*Pain, non-specific*	
116		

118	*Poisoning/OD*	
119	*Respiratory distress*	
120	*Seizure*	
199	*Unconscious, cause unknown*	
200	*Other illness*	
300	Obstetric	
400	Psychiatric	
	Trauma	

Element Name	***Witnessed Arrest, Pre-arrival*** (Element Number: 35)
Type:	Logical
Width:	1
Definition:	Cardiac arrest witnessed before arrival of EMS personnel
Significance:	This element was outlined as a core clinical data element by the December 1990 Utstein Consensus Conference.
Collection Issues:	
Recommended Validation:	
Recommended Coding:	

Element Name	**Initial Systolic BP** (Element Number: 36)
Type:	Numeric
Width:	3
Definition:	Patient=s initial systolic blood pressure
Significance:	This element can be used in conjunction with other elements to indicate a patient=s condition at initial assessment.
Collection Issues:	
Recommended Validation:	Compare to valid range.
Recommended Coding:	

Element Name	**Initial Diastolic BP** (Element Number: 37)
Type:	Numeric
Width:	3
Definition:	Patient=s initial diastolic blood pressure
Significance:	This element can be used in conjunction with other elements

	to indicate a patient≈s condition at initial assessment.
Collection Issues:	
Recommended Validation:	Compare to valid range.
Recommended Coding:	

Element Name	**Initial Pulse** (Element Number: 38)
Type:	Numeric
Width:	3
Definition:	Patient≈s initial pulse rate
Significance:	This element can be used in conjunction with other elements to indicate a patient≈s condition at initial assessment.
Collection Issues:	
Recommended Validation:	Compare to valid range.
Recommended Coding:	

Element Name	**Initial Respiration** (Element Number: 39)
Type:	Numeric
Width:	3
Definition:	Patient≈s initial respiration rate
Significance:	This element can be used in conjunction with other elements to indicate a patient≈s condition at initial assessment.
Collection Issues:	
Recommended Validation:	Compare to valid range.
Recommended Coding:	

Element Name	**Initial ECG** (Element Number: 40)
Type:	Numeric
Width:	2
Definition:	EMT≈s assessment of ECG when electrodes are initially applied to patient, coded
Significance:	This element indicates that patient≈s cardiac rhythm when initially assessed.
Collection Issues:	
Recommended Validation:	Compare to code set.

Code	Name	Definition
00	Unknown or N/A	Not properly indicated on PCR or not applicable
01	Normal sinus rhythm	
02	Sinus bradycardia	
03	Sinus tachycardia	
04	Ventricular tachycardia	
05	Ventricular fibrillation	
06	Asystole	
07	Atrial fibrillation/flutter	
08	PSVT	
09	AV block 1	
10	AV block 2	
11	AV block 3	
99	Other	

Element Name	*GCS Eye* (Element Number: 41)
Type:	Numeric
Width:	1
Definition:	Patient≠s initial GCS eye score
Significance:	This element can be used in conjunction with other elements to indicate a patient≠s condition at initial assessment.
Collection Issues:	
Recommended Validation:	Compare to valid range of values (1-4).
Recommended Coding:	

Element Name	*GCS Verbal* (Element Number: 42)
Type:	Numeric
Width:	1
Definition:	Patient≠s initial GCS verbal score
Significance:	This element can be used in conjunction with other elements to indicate a patient≠s condition at initial assessment.
Collection Issues:	

Recommended Validation:	Compare to valid range of values (1-5).
Recommended Coding:	

Element Name	*GCS Motor* (Element Number: 43)
Type:	Numeric
Width:	1
Definition:	Patient≠s initial GCS motor score
Significance:	This element can be used in conjunction with other elements to indicate a patient≠s condition at initial assessment.
Collection Issues:	
Recommended Validation:	Compare to valid range of values (1-6).
Recommended Coding:	

Element Name	**GCS Total** (Element Number: 44)
Type:	Numeric
Width:	2
Definition:	Total of patient≠s initial GCS scores
Significance:	This element can be used in conjunction with other elements to indicate a patient≠s condition at initial assessment.
Collection Issues:	If eye, verbal and motor scores are collected, this total should be calculated rather than entered.
Recommended Validation:	Compare to valid range of values (3-15).
Recommended Coding:	

Element Name	*Clinical Severity Impression* (Element Number: 45)
Type:	Numeric
Width:	1
Definition:	EMT≠s impression of patient severity as determined after initial assessment, coded (e.g. critical, serious, non-emergent)
Significance:	This element is useful as an indicator of a patient severity.
Collection Issues:	
Recommended Validation:	Compare to code set.
Recommended Coding:	See code set below.

Code	Name	Definition

0	Unknown	Not properly indicated on PCR
1	Non-emergent	
2	Serious	
3	Critical	
4	Dead on scene	

Element Name	***Arrest After Arrival of EMS Personnel*** (Element Number: 46)
Type:	Logical
Width:	1
Definition:	Cardiac arrest after arrival of EMS personnel
Significance:	This element was outlined as a core clinical data element by the December 1990 Utstein Consensus Conference.
Collection Issues:	
Recommended Validation:	
Recommended Coding:	

Element Name	***Clinical Course*** (Element Number: 47)
Type:	Numeric
Width:	1
Definition:	Patient≈s change in condition from time of initial assessment to time patient is discharged from the care of the EMS provider, coded
Significance:	This element is useful as an indicator of a patient≈s change in condition.
Collection Issues:	
Recommended Validation:	Compare to code set.
Recommended Coding:	See code set below.

Code	Name	Definition
0	Unknown	Not properly indicated on PCR
1	Field save	
2	Improved	
3	Maintained	
4	Deteriorated	

5	Expired	

Element Name	**Special Scene Conditions** (Element Number: 48)
Type:	Numeric
Width:	2
Definition:	Any special scene conditions, coded (e.g. complicated extrication, hazardous material)
Significance:	This element is useful to indicate special conditions that may affect patient care.
Collection Issues:	It is usually preferable to allow for collection of more than one special scene condition per record.
Recommended Validation:	Compare to code set.
Recommended Coding:	See code set below.

Code	Name	Definition
00	None identified	
01	Complicated extrication	
02	Do Not Resuscitate order form/medallion	
03	Hazardous material	
04	Physician on scene	
05	Possible provider exposure	
06	Unsafe scene	
99	Other	

Element Name	**Safety Equipment Used** (Element Number: 49)
Type:	Numeric
Width:	2
Definition:	Safety equipment used by patient, coded (e.g. lap restraint, shoulder restraint, airbag)
Significance:	This element allows for analysis of what safety equipment was and was not used by injured patients for given sets of records, which can yield injury prevention related information.
Collection Issues:	It is recommended that up to four entries per record be possible.
Recommended Validation:	Compare to code set.

Recommended Coding:	See code set below.

Code	Name	Definition
00	Unknown or N/A	Not properly indicated on PCR or not applicable
01	None	No safety equipment was used where such equipment was appropriate.
02	Lap restraint	
03	Shoulder restraint	
04	Child safety seat	
05	Airbag	
06	Helmet	
07	Protective clothing	
99	Other	

Element Name	**Alcohol Use Suspected** (Element Number: 50)
Type:	Logical
Width:	1
Definition:	Alcohol use by patient suspected
Significance:	This element can be used in conjunction with other elements to indicate a patient≈s condition. It cal also be used to analyze the proportions of different sets of records in which alcohol use is suspected. Additionally, this element will be a requirement for a forthcoming national data set regarding injury prevention.
Collection Issues:	
Recommended Validation:	
Recommended Coding:	

Element Name	**Drug Use Suspected** (Element Number: 51)
Type:	Logical
Width:	1
Definition:	Drug use by patient suspected
Significance:	This element can be used in conjunction with other elements to indicate a patient≈s condition. It can also be used to analyze that proportions of different sets of records in which illicit drug use is suspected. Additionally, this element will be requirement for a forthcoming national data set regarding injury prevention.

Collection Issues:	
Recommended Validation:	
Recommended Coding:	

Element Name	**Primary Destination Decision Reason** (Element Number: 52)
Type:	Numeric
Width:	1
Definition:	Primary reason why a particular medical facility was selected to receive the patient, coded.
Significance:	This element allows for grouping and analysis of records by destination reason.
Collection Issues:	
Recommended Validation:	Compare to code set.
Recommended Coding:	See code set below.

Code	Name	Definition
0	Unknown	Not properly indicated on PCR
1	Most accessible receiving facility	
2	Base hospital order	
3	Diversion	
4	Physician request	
5	Patient/family request	
6	Triage to trauma center	
7	Triage to other specialty center	
9	Other	

Element Name	**Base Hospital** (Element Number: 53)
Type:	Numeric
Width:	4
Definition:	Medical facility where on-line medical control orders were obtained, coded.
Significance:	This element allows for grouping of records by base hospital, and for analysis where base hospital are a factor, such as base hospital by receiving hospital reports.

Collection Issues:	
Recommended Validation:	Compare to code set.
Recommended Coding:	State assigned four-digit hospital numbers.

Element Name	**Receiving Hospital** (Element Number: 54)
Type:	Numeric
Width:	4
Definition:	Medical facility the patient is transported to, coded
Significance:	This element allows for grouping of records by receiving hospital, and for analysis where receiving hospitals are a factor, such as base hospital by receiving hospital reports. It also aids linkage of prehospital data with receiving hospital data.
Collection Issues:	
Recommended Validation:	Compare to code set.
Recommended Coding:	State assigned four-digit hospital numbers.

Element Name	**Primary Patient Attendant** (Element Number: 55)
Type:	Character
Width:	6
Definition:	Certification number of EMT with primary responsibility for patient care
Significance:	This element indicates the primary patient attendants for each call, and allows for association of EMT≈s with treatments performed.
Collection Issues:	It may not be necessary to have this as an explicit element in data systems where administration of procedures and medications are collected and attributed to EMT≈s via their certification numbers.
Recommended Validation:	Compare to certification number set.
Recommended Coding:	For paramedics, their state assigned six-character certification numbers.

Element Name	**Secondary Patient Attendant(s)** (Element Number: 56)
Type:	Character
Width:	6
Definition:	Certification numbers of EMTs with secondary responsibility

	for patient care
Significance:	This element indicates secondary patient attendants for each call, and allows for association of EMTs with treatments performed.
Collection Issues:	It may not be necessary to have this as an explicit element in data system where administration of procedures and medications are collected and attributed to EMTs via their certification numbers. If this is an explicit element, it usually will need to be possible to collect more than one.
Recommended Validation:	Compare to certification number set.
Recommended Coding:	For paramedics, their state assigned six-character certification numbers.

Element Name	**Procedure(s)** (Element Number: 57)
Type:	Numeric
Width:	3
Definition:	Procedures performed by EMTs first responders, by bystanders coded. These should be related to care giver types and certification numbers (if applicable) of the care gives that actually performed the procedures.
Significance:	This element allows for analysis of procedures performed during EMS calls, and for association of procedures with the EMTs that perform them. This element is also necessary to automatically determine **Call Level** (ALS or BLS).
Collection Issues:	It must be possible to collect any number of procedures for each record, and each procedure should have a corresponding certification number or care giver type, indicating who performed the procedure. It is preferable to track procedures in a separate data table from the basic Prehospital Data table, related to the basic Prehospital Data table by a unique key, such as Call Date + PCR Number. That way a one-to-many relationship between basic patient care records and procedure records can easily be established.
Recommended Validation:	Compare to code set.
Recommended Coding:	See code set below

Code	Name	Definition
BLS Procedures		
101	Assessment	
111	Airway oral care	

112	Airway adjuncts, OPA/nasal	
113	Oxygen mask/cannula	
114	PPV, mouth to mouth	
115	PPV, mouth to mask	
116	PPV, BVM	
117	PPV, demand ventilator	
118	Suction	
121	CPR	
122	Defibrillation, automatic	
123	Defibrillation, semi-automatic	
131	Dress wounds/bandaging	
132	Hemorrhage control	
141	Immobilize neck (C-collar)	
142	Immobilize back (back board)	
143	Restraints	
144	Splint	
145	Traction splint	
151	IV monitoring	
161	Obstetric assistance	
171	Psychiatric assistance	
181	Snake bite care	
ALS Procedures		
201	ECG monito	
202	Blood draw	
203	Glucose determination by finger stick	
204	Pulse oximetry	
211	Cricothyrotomy, needle	
212	Endotracheal intubation, oral	

213	Endotracheal intubation, nasal	
214	EOA/EGA/EGTA	
215	Needle thoracostomy	

216	Removal of foreign body using McGill Forceps	
221	Cardiovert	
222	Carotid sinus massage	
223	Defibrillation	
224	Vaga maneuver	
231	Fluid challenge	
232	Heparin lock	
233	Intraosseous infusion	
234	Peripheral IV	
235	Saline lock	
241	Foley catheter	
242	Naso-gastric tube	
251	Procainamide monitoring	
261	MAST	
299	Other ALS procedure	

Element Name	**Medication(s)** (Element Number: 58)
Type:	Numeric
Width:	3
Definition:	Medications administered by EMTs, first responders, or bystanders, coded. These should be related to care giver types and certification numbers (if applicable) of the care givers that actually administered the medications.
Significance:	This element allows for analysis of medications administered during EMT calls, and for association of medications with the EMTs that administer them. This element is also necessary to automatically determine **Call Level** (ALS or BLS).
Collection Issues:	It must be possible to collect any number of medications for each record, and each medication should have a corresponding certification number or care giver type, indicating who administered the medication. It is preferable to track medications in a separate data table from the basic Prehospital Data table by a unique key, such as **Call Data** + **PCR Number**. That way a one-to-many relationship between basic patient care records and medication records can easily be established.
Recommended Validation:	Compare to code set.
Recommended Coding:	See code set below.

Code	Name	Definition
BLS Medications		
301	Glucose, oral	
302	Oxygen	
ALS Medications		
401	Activated charcoal	
402	Adenosine (II)	
403	Albuterol (Proventil)	
404	Aspirin	
405	Atropine	
406	Bretylium (Bretylol)	
407	Calcium chloride	
408	Dextrose 25% (D25)	
409	Dextrose 50% (D50)	
410	Diazepam (Valium)	
411	Diphenhydramine (Benadryl)	
412	Dopamine (Intropin)	
413	Epinephrine	
414	Furosemide (Lasix)	
415	Glucagon (I)	
416	Ipecac, syrup of	
417	Isoproterenol (Isuprel)	
418	Lidocaine (Xylocaine)	
419	Magnesium Sulfate (II)	
420	Mannitol (II)	
421	Metoproterenol (Alupent)	
422	Naloxone (Narcan)	
423	Nitroglycerine	
424	Nitrous Oxide (II)	
425	Oxytocin	
426	Potassium Chloride	Inter-facility transfers only

427	Sodium bicarbonate	

428	Terbutaline (Brethine)	
429	Verapamil (II)	
499	Other ALS Medication	